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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/588,988 | 06/18/2007 | Juha Aalto | 1003277-000058 | 4247 |

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| EXAMINER |
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ABDOSHI, SAMIR

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| ART UNIT | PAPER NUMBER |
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4165

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| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

07/21/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/588,988 | | AALTO, JUHA | |
| | Examiner | | Art Unit | |
| | SAMIR ABDOSH | | 4165 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10 August 2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is a first Office Action Non-Final rejection on the merits.

Claims 1-5 as originally filed, are currently pending and have been considered below.

Claim Objections

1. Claim 5 is objected to due to the recitation of the limitation "the support plate" in line 3. There is insufficient antecedent basis for this limitation in the claim, however it has been construed as "a support plate" for purposes of examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. The term "small" in claim 4 is a relative term which renders the claim indefinite. The term "small" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term "small" is used to describe the approach angle with which an interchangeable barrel is introduced to a receiving lock frame assembly. Since a definitive angle, or range thereof, does not exist in the applicant's disclosure, a "small" angle is construed as the minimum angle necessary for implementation of a barrel to a lock frame assembly.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by North (US 1,363,262).

As per claim 1, North teaches a system for fastening the barrel **(B)** of a rifle with replaceable barrel, the system consisting of a lock frame **(A)**, into which the barrel socket can be pushed into position and locked with a bolting device wherein the bolting device consists of a barrel block stop **(a¹)** provided at the top of the lock frame **(A)**, a groove **(b)** in the socket of the barrel **(B)** being insertable into the stop **(a')** when the barrel **(B)** is clamped into locked position (see Figures 1 and 5 for position of elements during locked configuration).

As per claim 4, North teaches the opening in the lock frame **(A)** has been shaped such that the barrel socket can be pushed into the lock frame **(A)** at a small angle, with the flange portion **(b¹)** of the groove **(b)** in the barrel socket being allowed to pass by the block stop **(a')** before the barrel **(B)** is clamped into position (Figure 3 illustrates the small angle with which the barrel **B** installs into lock frame **A**, Figures 3 and 5 indicate that the flange portion **b¹** of groove **b** passes by the block stop portion **a¹** of lock frame **A**).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over North (US 1,363,262), as applied in claim 1 above, in view of Rieger (US 4,729,186).

As per claim 2, North teaches a barrel block stop (element **a'** and locking pin **C** both function as block stops) whose acruate portion settles in a groove (**b³**) in the barrel socket in locked position (Figure 4 diagrams how pin **C** settles in groove **b³** and Figure 5 illustrates a cross section of the pin **C** traveling transversely through the groove **b³** in the locked position), but fails to explicitly teach that the barrel block stop is a separate device fastened to the lock frame.

North fails to teach a separable barrel block stop fastened to the lock frame, however the claimed invention fails to demonstrate evidence supporting the criticality of a separable barrel block stop as opposed to the integral barrel block stop taught by North. Therefore, it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to make the block stop separable since it has been held that making separate parts of a single integral device involves only routine skill in the art (*In re Dulberg* 129 USPQ 348).

As per claim 3, North teaches a block stop **(a')**, a lock frame **(A)**, but fails to explicitly teach a spring-loaded support plate under which a clamping device is provided, such as a bolting screw tightened from the underside of the gun and allowing the barrel socket to be clamped in the lock frame upwardly against the block stop.

Rieger discloses a firearm with barrel holder for interchangeable barrels that teaches the use of a spring **(25)** loaded lock bolt **(24)** that clamps an interchangeable barrel (via projecting extension **13**) in a secure fashion against the locking frame **(3)** (see Figures 1 and 2 for diagram of elements and column 4, lines 52-63 for detailed description of lock bolt function).

Therefore, it would have been obvious to one of ordinary skill in the art to combine the fastening system taught by North to include the spring loaded support bolt taught by Rieger in order to ensure that the lock bolt is automatically biased during pivoting of the barrel (see column 4, lines 57-63).

As per claim 5, North teaches barrel **(B)** with a plane surface (see Figure 4 for diagram of planar surfaces of barrel **B**), but fails to explicitly teach the underside of the barrel socket bearing against a support plate.

Rieger discloses a firearm with barrel holder for interchangeable barrels that teaches the use of a lock bolt **(24)** that clamps an interchangeable barrel (via projecting extension **13**) in a secure fashion against the locking frame **(3)** (see Figures 1 and 2 for diagram of elements and column 4, lines 52-63 for detailed description of lock bolt function).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the barrel taught by North to include the locking support bolt taught by Rieger in order to provide a means of positioning the barrel securely between locked and unlocked positions (see column 4, lines 57-63 for description of lock bolt engaging the barrel in locking position and column 5, lines 29-39 for description of lock bolt transitioning the barrel into unlocked position).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cormack (US 4,779,370) discloses a firearm with removable barrel and telescopic sight. Hochstrate (US 2006/0026883) discloses a modular firearm having a removable barrel. Kinkner (US 4,989,359) discloses a shotgun having interchangeable barrels (US 4,989,359). Perry (US 2002/0078616) discloses a barrel assembly with removable barrel inserts for pneumatic paintball guns. Shaw (US 4,519,156) discloses a firearm with interchangeable barrels. Wait (US 2007/0186458) discloses an interchangeable barrel system for rifles.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAMIR ABDOSH whose telephone number is (571)270-5799. The examiner can normally be reached on Monday through Thursday 7:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynda Jasmin can be reached on 571-272-6782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SIA

/Lynda Jasmin/

Supervisory Patent Examiner, Art Unit 4165